CHAPTER 1

INTRODUCTION

1-1. PURPOSE

The purpose of this manual is to help personnel use the Army Facilities Components System (AFCS) and its products when preparing for and executing Army construction missions in a theater of operations (TO).

1-2. SCOPE

This manual is a single-source reference for the operation of AFCS and available AFCS products. Example problems demonstrating the system's use and information about requisition and supply procedures are included.

1-3. REFERENCES

Appendix A lists the references cited in this document.

1-4. EXPLANATION OF ABBREVIATIONS

Abbreviations and acronyms used in this manual are explained in section I of the glossary. Abbreviations for construction materials are explained in section II of the glossary.

1-5. BACKGROUND

a. Definition. AFCS is a military engineering construction support system for construction requirements in a TO. AFCS provides data to military planners so that they can prepare contingency plans and support estimates and specific design and logistics information for supplying, constructing, and maintaining facilities in a TO.

b. The Need for AFCS. AFCS was designed in response to the vital need for an improved construction planning and supply system. Large inventory errors discovered at the close of World War II were basically caused by the supply system's inadequate inventory capability. During the Korean Conflict, in the absence of a construction planning and supply system, TO planners lacked the resources needed to generate specific projects for base development. Thus, they were forced to use the World War II system of forecasting their needs for across-the-board items of construction material, primarily by reviewing the thousands of items in supply catalogs.

c. The Development of AFCS. Since its inception in 1951, AFCS has grown to include planning guidance, detailed construction drawings, and computer updated bills of materials (BOM) for about 3,000 facilities. Some of the facilities included in the system are troop housing, hospitals, bridges, roads, supports, petroleum storage and distribution, and ammunition storage. The system is used:

- For joint, deliberate planning activities (Civil Engineer Support Planning (CESP) development).
- By major Army commands (MACOM's) for theater contingency planning, temporary construction projects, and engineer unit training.
- To support engineer contingency studies.
- To support operational projects.
- To determine contingency Class IV requirements.
- By the U.S. Army Training and Doctrine Command (TRADOC) to support individual training.
- To support Army force development processes.

d. The Automation of AFCS. The Theater Army Construction Automated Planning System (TACAPS) was developed in 1985 in order to provide a method for accessing and using current AFCS design and logistics master files in a remote location. TACAPS requires the user to have a microcomputer system for accessing and using AFCS logistics information. TACAPS provides an automated method of identifying, maintaining, and disseminating information for construction planning in a TO or for contingency situations. TACAPS has the unique capability of generating theater facility requirements in terms of either specific AFCS facilities or gross measurement requirements (such as square feet, gallons, etc.) for deployable Army units based on either unit type codes (UTC's) or standard requirement codes (SCR's).

1-6. AFCS PUBLICATIONS

AFCS consists of a series of four Department of the Army (DA) technical manuals (TM's). TM 5-304 and its companion manuals, TM 5-301, TM 5-302, and TM 5-303, and the TACAPS User Guide are described briefly

in paragraphs a through d below. Chapter 3 provides detailed instructions for using the manuals.

a. TM 5-301 Series, Army Facilities Components System - Planning. The 301 series is generally used by military planners and contains installation, facility, and prepackaged expendable contingency supplies (PECS) summaries. TM 5-301 is published in four volumes: TM 5-301-1, TM 5-301-2, TM 5-301-3, and TM 5-301-4. Each volume addresses a separate climatic zone: temperate, tropical, frigid, and desert, respectively. PECS summaries and facility listings include (1) cost, shipping weight, and volume of material and (2) estimated man-hours needed to construct each facility and installation. The TM 5-301 series may be used by planners at higher levels without referring to TM 5-302 and TM 5-303 (see b and c below). The U.S. Army Engineer Division, Huntsville (USAEDH) maintains current summary information for the facilities and installations listed in the TM 5-301 manuals.

b. TM 5-302 Series, Army Facilities Components System - Design. The 302 series is a multivolume manual containing design drawings for installations and facilities; it is of primary interest to the unit actually constructing AFCS facilities in a TO. TM 5-302 is updated when new facilities are added to the system, old ones are deleted, or revisions are made. The designs address the four climatic zones listed in paragraph a above and the two construction standards described in paragraph 2-5 below. The manuals are printed and initially distributed through the U.S. Army Publications and Printing Command.

c. TM 5-303 Series, Army Facilities Components System - Logistics Data and BOM. The 303 series is generally used by planners, builders, and supply personnel who need to identify items in the BOM. Each item in a facility (or PECS kit) is identified by a National Stock Number (NSN) and an abbreviated description. The material cost, shipping weight, volume, and estimated construction effort in man-hours are also provided. USAEDH maintains current logistics information for the items in TM 5-303; the information is available in TM 5-303 format.

d. CEHND 1105-1-1, TACAPS User Guide. Provided upon request, the TACAPS User Guide is an AFCS specialty document that is not one of the official AFCS TM's; however, it does contain instructions for accessing and using the computerized facility and installation master files of AFCS information. Chapter 3 provides further information about TACAPS.

1-7. COMMENTS AND INFORMATION SOURCES

Data for the manuals are maintained by the U.S. Army Corps of Engineers (USACE). The data in TM 5-301 and TM 5-303 are available by direct computer access via printouts, magnetic tape, or diskette. The drawings in TM 5-302 are half-size (14 by 20 inches) reproducible drawings; those drawings are also available, upon request, in full-size (28 by 40 inches) reproducible or blueline prints or computer input diskette for computer-aided drafting and design. All correspondence and requests for technical assistance, drawings, and information regarding the AFCS system should be sent to either:

U.S. Army Engineer Division, Huntsville
ATTN: CEHND-ED-SY
P.O. Box 1600
Huntsville, AL 35807-4301

or

HQDA (DAEN-ZCM)
Washington, DC 20310-2600

AFCS users are encouraged to submit comments and recommendations for improvement or revision directly to HQDA (DAEN-ZCM), Washington, DC. Comments should refer to the specific drawing, facility, or installation. The reason for each comment or recommendation should be stated in order to ensure proper understanding and evaluation.

1-8. INCONSISTENCIES, ERRORS, AND OMISSIONS

a. Design Reviews and Updates. AFCS is reviewed in order to isolate and correct inconsistencies and incorporate changes in the design drawings and the BOM. Since design work has been carried out over a long period of time, updating and revising are continual.

b. Facility and Installation Suitability. Users should carefully study the facilities or installations they propose to acquire, since some facilities or installations might be complete as ordered, while others could require additional or fewer facilities in order to obtain the desired final product.

c. Cost Data Updates. Cost data are accurate only at the time of issue. Those data are updated quarterly and can be obtained from USAEDH or accessed by microcomputer in accordance with TACAPS procedures.

1-9. RESPONSIBILITIES

USACE continually reviews and updates this manual—a process that includes coordination with DA staff agencies, overseas commands, and other users affected by construction for contingency operations. AR 415-16 details the responsibilities of USACE and other agencies or commands.

1-10. CAMOUFLAGE AND DISPERSAL

a. Camouflage. Camouflage is the technique of concealing or disguising military activities, materiel, and personnel. It is used to gain the element of surprise and to reduce destruction of equipment and personnel casualties by enemy actions. Camouflage permits the movement and placement of materiel and personnel without detection and gives the impression of being in a position or location that is not really occupied.

b. Dispersal. AFCS installation plans use minimum real estate and utilities and are based on functional relationships between facilities. Where dispersal is required because of terrain features or expected enemy actions, additional roads, utilities, and real estate must be added to the plans and constructed.

c. Further Information. See appendix B for specific information about using camouflage and dispersal.

1-11. BOMB DAMAGE REPAIR

Regardless of how secure a camp may be, the possibility that all or part of a facility could be damaged by enemy actions must be considered. See appendix C for a bomb damage repair matrix of suggestions about repairing typical bomb damages.